CATALYST

Inclusive Cashless Payment Partnership

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QUICKSAND

Digitizing Micro-business Ecosystems

Roving Service Providers

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Contents

Context

Understanding the roving service provider ecosystem

Roving service providers are representative of a broad category of merchants that could be characterised by either of the following:

- Provide last-mile, hyper-local distribution of formal, subscription based services like cable broadcast, internet services and newspapers. The product or service they are distributing is offered by mainstream brands and they serve as the bridge between bigger distributors and hard-to-reach, last-mile customers.

- Provide non-branded, subscription-based services, delivered at the consumer's doorstep with fixed frequency (eg. milkman , florist, gardener). The products and services they offer are locally sourced, and therefore do not have a linkage with upstream distributors and brands.

- Provide ad-hoc, on-demand, job-based services at the consumer's home (eg. electrician, plumber, painter, carpenter).

Service providers in this segment are usually stand-alone micro-entrepreneurs, offering recurring services to fragmented customers (typically households), though at different frequencies. Regardless of the category of service being provided, these are characterized, amongst other aspects, by an informal, trust-based contract between the service provider and the customer, a stressed working capital on the part of the service provider, and an ad-hoc, convenience based payments and collection mechanism with no or little formal recordkeeping on either side. Given the low margins and fickle cash flows inherent in these businesses, roving service providers often partake in secondary income generating activities such as a day-time job.

Detailed below are some defining characteristics of these roving service providers. While the parameters listed below are not the only means of differentiating them, they do give a window into the unique pain points that characterise each.

Type of service provider	Credit period to customers	Billing frequency	Number of customers served	Business viability (margins, profitability)	Any form of record-keeping?
Fixed frequency, hyperlocal distribution of branded products & services (newspaper vendor, cable operator, internet service provider)	High	Monthly or quarterly	High (> 500 households)	Relatively High	Yes (usually a manual record kept by the service provider with little visibility to the customer)
Fixed frequency, doorstep delivery of non-branded products & services (Eg. milkman, gardener, car cleaner, florist, press wallah)	Low	Monthly (or threshold based for example, a dhobi who would collect payments once the bill amount is substantial	Low (< 50 households)	Low	No (attendance register of days worked on, if at all)
Ad-hoc, on demand, job based services (plumber, electrician, carpenter, water supplier etc)	Low	Pay per use, sometimes with retainer	Medium (< 100 households)	Medium	No (pay per use)

* *Values listed above are qualitative assessments and not definitive or empirically backed.*

Summarised below are a few critical pain points that are evident along the value chains that these roving service providers occupy and point to broken payment and transaction flows.

Limited bargaining power creates working capital stress from either end of the value chain

In situations where the roving provider is being supplied products by mainstream distributors / brands, they often have to pay up front. The collections, on the other hand, are determined by the convenience of the customer and thereby accentuate cash flow concerns.

Design principle #1: Reduce working capital stress

Protracted payment cycles because of unavailability of customers and/or cash-on-hand

While the frequency of billing is most often monthly, the payment cycles extend well beyond that because at the time of collections, the customer is either unavailable or cites lack of necessary change. Sometimes a part payment may be made, creating problems in reconciliation later.

Design principle #2: Prioritize timely and seamless payments

Managing a large customer base through ad-hoc, manual invoicing and reconciliation systems

Roving service providers managing a large customer base (for example, newspaper vendors, cable operators) typically track deliveries manually and leave hand-written bills with customers, if at all. These bills are either misplaced or hard to reconcile without proper proof of delivery. For the service providers managing several hundred customers in some cases, reconciling accounts is time consuming with payments coming from different customers at different times.

Design principle #3: Automate financial record-keeping

Absence of interactions with customers creates a service delivery gap

It is almost always the case that the roving service provider and the consumer do not regularly interact when the services are availed. This characteristic distance creates a gap in service delivery that is potentially detrimental to both the service provider and the customer (for example, inability to share updates on changes in delivery schedule, new offers, or address grievances).

Design principle #4: Facilitate remote interactions that can improve service experience

Informal trust-based agreements

Most roving services – whether delivery that is potentially detrimental on long-standing trust between the service provider and the customer. While creating customer stickiness, in an instance where the services offered are contested (either on account of skipped deliveries, or poor quality), there is no traceability or recourse for either party.

Design principle #5: Leverage inherent trust and affinity to influence behavior change

Design principle #6: Design more accountability in service provision

Limited ability to expand customer base

While there is a great deal of customer "stickiness" that is inherent in these businesses, the ability of a service provider to expand his/her customer base is limited. With issues such as fickle cash flows and low margins necessitating multiple jobs, service providers have little time left to focus on activities that can potentially expand their customer base

Design principle #7: Use customer analytics to target offers and expand customer base

Case study

Digital interventions with newspaper vendors in Jaipur, Rajasthan

Objective of the intervention

A survey of 402 individual service providers (ISPs) comprising drivers, electricians, plumbers, artisans, and sweepers among other service providers revealed that collection of payments was a key pain-point for roving service providers.[1] In response to this need, CATALYST conducted a series of interventions focusing on newspaper vendors in Jaipur, Rajasthan.

CATALYST worked with newspaper vendors who typically transacted Rs 60,000-80,000 per month across ~400 customers. Their commission structure from these sales was roughly 25%, which translates into a revenue of Rs.15,000-20,000 per month.

The following pain points were identified with respect to the business operations of a newspaper vendor:

- The business model involves inherent working capital stress because of the burden of buying newspapers upfront from the principal distributor but receiving payments only once a month from customers after repeated follow-ups.
- The vendor manually prepares bills for customers at the end of every month, an activity that is tedious and time consuming. For a newspaper vendor of the size being discussed, this usually involves 20 hours of work every month and represents a significant opportunity cost.
- On average, payment collection takes about 20-22 days from the date of invoice wherein the newspaper vendor makes two to three repeat trips per customer and spends, on average, three to six hours per day across his entire customer base. Typically, one collection agent is required to service 300-400 customers. Thus, for larger customer bases, vendors need to hire collection agents at a cost of Rs. 10,000-15,000 per month. Also, up to 3% of net receivables (and a much higher fraction of earnings) in any month can be written off as defaults (e.g., customers are not trackable).
- Newspaper vendors spend about 10-12 hours per month maintaining the books, and incur a bill book stationary cost of Rs. 1000 annually.

1 CATALYST surveyed 402 individual service providers as part of a larger study on mapping merchant behaviors and contexts in Jaipur, in collaboration with PRICE, 2017.

Target segment and scope of the intervention

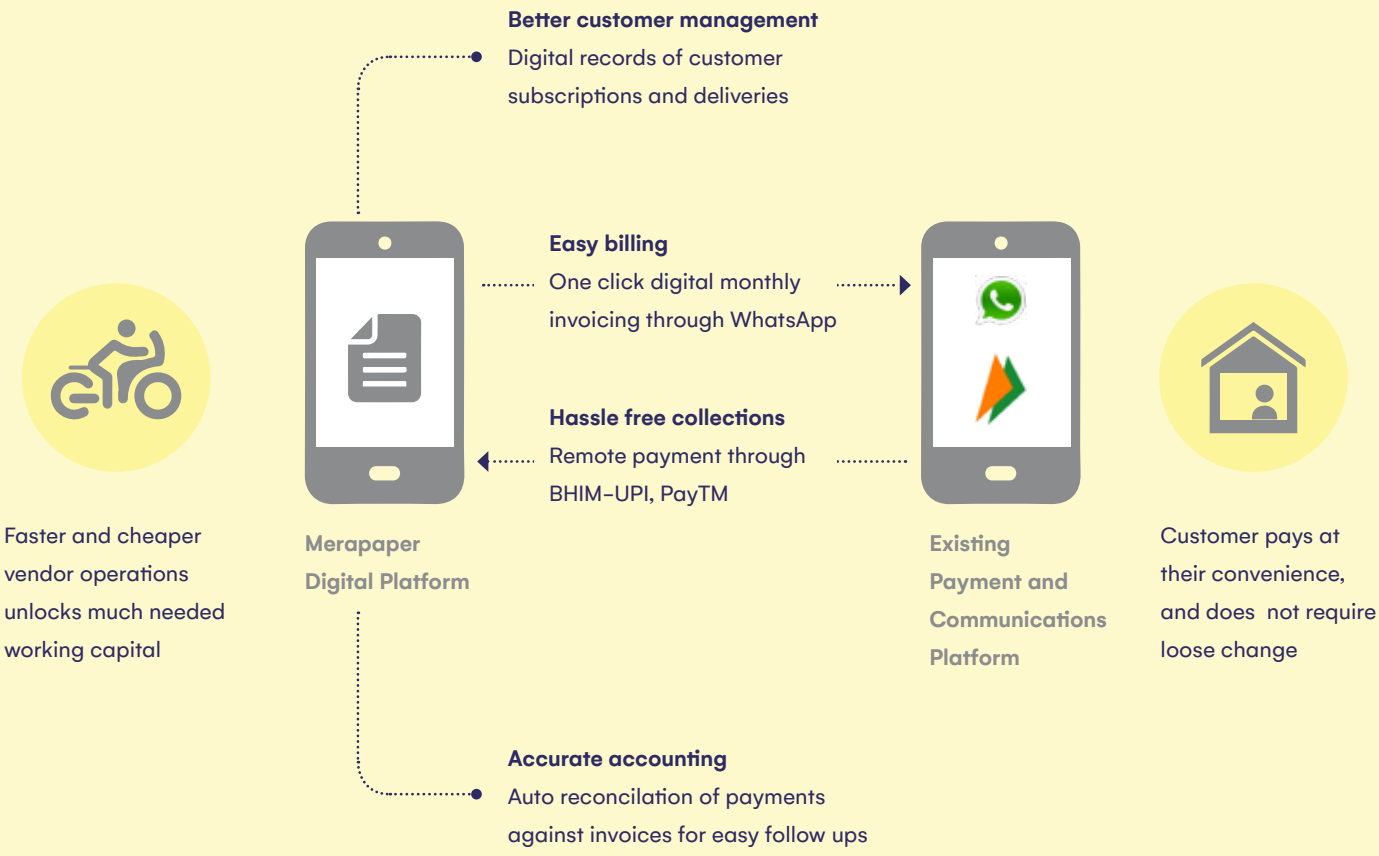
CATALYST worked with Merapaper (subsequently renamed to Bix42), a fin-tech startup attempting to digitize the semi-organized services sector, to innovate on their existing platform to address above mentioned pain points. While initially, the solution was imagined as an invoicing and billing platform, it was quickly realised that inclusion of digital payments was a must to make the platform attractive to newspaper vendors. The core components of the solution included:

- Creation of digital invoices at the end of the month sent automatically and in bulk as SMS. A business Whatsapp profile enabled follow-ups and grievance redressal.

- Providing a payment link embedded in the invoice through which customers could pay the newspaper vendor through multiple payment platforms such as UPI, PayTM, internet banking etc.

- Reconciliation of payments against invoices with an easy dashboard to inform the vendor which customers to follow up with.

Post pilot, Merapaper (Bix42) has expanded to over a thousand vendors, expanding beyond newspaper delivery into segments such as cable and internet service providers.



Additional features:

1. Custom billing cycles
2. Advance payments (choice of prepaid and postpaid)
3. Customer complaint management (through customer app)
4. Order change or modification service
5. GST compliant billing for business customers

A summary of the different phases of the experiment and associated learning is given below:

Phases of experiment	Activities	Learnings
Phase 1: Merchant identification and onboarding	Registration of the selected newspaper vendors and training of vendor to download and use features like "collect request" of UPI payment apps like BHIM & Phone Pe	Building awareness of the multiple other use cases of digital payments outside their prime business, and of other general benefits can be more persuasive for merchants to adopt these payment methods
Phase 2: Sampling and consumer onboarding	**Sampling and shortlisting** of a few residential areas with a high concentration of the customer base where a sample of 300 households could be engaged with an average monthly income of approximately INR 12,000. It was consciously decided to start with a low income customer profile as a conservative base case, with the assumption that if such a business model could be validated, others would naturally follow more easily. **Consumer onboarding and activation:** On his daily collection beat, the vendor introduced a CATALYST agent to the consumers who then briefed them about the benefits of UPI apps and helped onboard them onto these apps. **Payment collection through UPI:** The vendor then shared his Virtual Payment Address (VPA) along with the monthly invoice to collect payments from consumers	In low-income areas, the majority of the households mostly had only a single smartphone. Promoting digital payments therefore depended on the availability of the smartphone user of the family; and their familiarity with digital payment solutions

Phases of experiment	Activities	Learnings
Phase 3: Handholding and trialability	**Nudge for the first payment using UPI:** Upon successful registration on UPI platforms, the consumers were nudged by the distributor to make their current monthly bill payment using UPI. **Payment reconciliation:** The distributor shared his BHIM transaction history with MeraPaper on a daily basis who then manually reconciled it using the consumer details (name and VPA) recorded during onboarding. The updated record was reflected on the vendors dashboard on MeraPaper app.	Trust, familiarity and good relations between consumers and vendors facilitated adoption of digital payments, with influence on new behaviors rubbing off both ways. Owing to prevailing cash payment habits and limited understanding of and trust in digital alternatives, there was a strong need to build awareness and people's capacity for using digital payments, through: • awareness material and reference guides to illustrate steps to be followed for digital payment app onboarding and use • a first-time-use experience to support the user and build their confidence around their ability to pay digitally Integration of payments with the billing obviated the need for manual reconciliation
Phase 4: Behavioral shift and monitoring	**Sending out bulk automated invoices:** The distributor generated automated invoices for all 200 consumers in the sample and sent these invoices to the consumers using WhatsApp or SMS messages. Experiments to test uptake of payment solutions involved: • Providing incentives to consumers to make payments through UPI by providing discounts on monthly bills (this could be tweaked on the basis of response) • Segregating the target households into two sets, one who were sent a "collect request" through UPI apps and the other that would make a self initiated transaction	Though incentives act as a good first-time hook, consumers use the app without incentives after the second month. Periodic transaction helped in sustaining the digital payment behavior. Consistent remote payment behavior from consumers helped the vendor save up to 60 hours of collection time every month even though for the initial few months they had to spend more time on onboarding consumers Frequent feedback from vendors, allowed MeraPaper to iterate and refine the UI of the app to be more intuitive and easy to use

METRICS SYNOPSIS

300+ **Low-income Households** were engaged

30% Consumers who were engaged **adopted** digital payment methods (i.e., signed up on a platform and agreed to pay digitally)

93% Adopters made their **first payment** digitally (with a small incentive of Rs. 15-25 against a future bill of Rs. 150-200)

60% First time payers made **repeat payments** over next 3 months

Post pilot, even under a lower touch model, approximately 15% of total invoices sent are receiving digital payments

Opportunity

Enabling roving service providers to streamline and grow their businesses

Nearly 80.9 percent of India's employed population earns its livelihood in the informal economy (ILO). A large part of this informal economy comprises of blue-collar jobs such as home-repairs, driving, construction, and others.

Startup research platform Tracxn has reported that over 270 startups catering to home services have been set up in India between 2012 to 2017, including horizontal firms that have numerous services categories, and category-specific aggregators providing specific services such as laundry, home cleaning, plumbing, wedding planning, photography and fitness instruction.[2]

Merapaper pegs the total transaction value of the newspaper distribution market at Rs 2,30,000 crores per year. With the cost of collection at roughly 3-5%, there is a market of about Rs 7000 crore per year that a solutions provider can appropriate if they can help the service providers eliminate these costs. At a conservative 30% acquisition estimate, the opportunity size is roughly around Rs 2100 crore per year.

2 https://www.livemint.com/Companies/ck6h9KKDL9Aw1SCgzvMLRM/The-building-of-UrbanClap-one-ondemand-service-at-a-time.html

Opportunity 1

Time savings from easier, faster and remote invoicing, collections and reconciliation

Opportunity 2

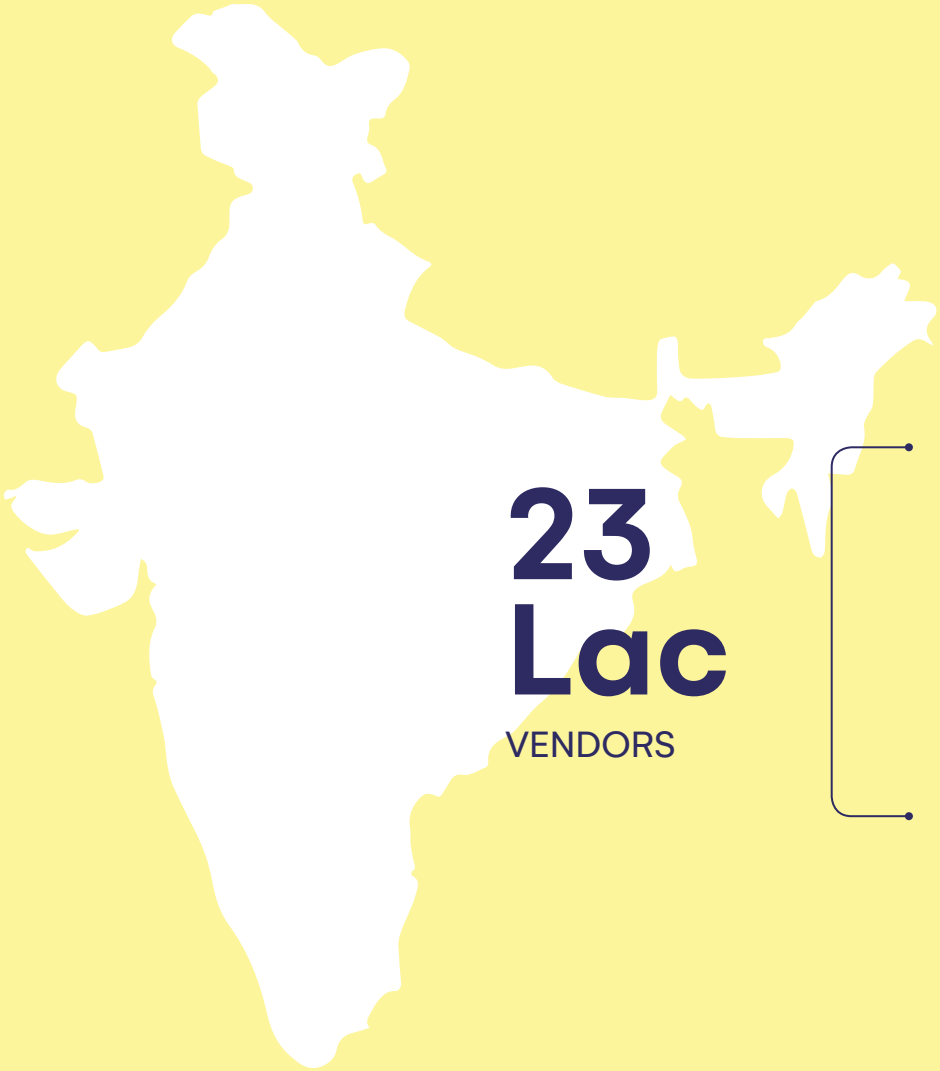
Access to additional working capital through faster payment cycles and leveraging a digital footprint

Opportunity 3

Deeper business insights and ability to serve customers more effectively

Opportunity 4

Progressively increasing value to service providers as their usage of the platform increases



23 Lac
VENDORS

- Newspaper
- Milk
- Cable
- Internet
- Tiffin
- Sabjiwala
- Kirana

TOTAL TXN VALUE : **INR 230,000 CR/YEAR**

3-5 % Cost of Collection →

INR 7000 CR/YEAR

30% Acquisition →

INR 2100 CR/YEAR

Against the backdrop of this massive opportunity in the semi-organized services space, a viable business model built around digital solutions for the roving service provider hinges on principally four key value propositions:

Time savings from easier, faster and remote invoicing, collections and reconciliation

The loss of productive hours in repeated follow-ups with customers for collections, and in doing manual invoicing and reconciliation, represent big opportunities wherein a digital solution can be introduced to free-up time of service providers and make the entire process more systematic and streamlined. At the scale of these micro-entrepreneurs, such a solution represents essentially a micro enterprise resource planning system (micro-ERP) that also incorporates digital payments. The additional time savings directly translate to additional income opportunities either through the vendor's ability to focus on activities related to business growth or to undertake more secondary employment.

Access to additional working capital through faster payment cycles and leveraging a digital footprint

Inspite of long-standing relationships between vendors and customers, with customers, the pre-dominant cash-based nature of financial transactions in this sector does not capture the long history of service provision that most of these service providers have. Creating a digital footprint over time will allow the providers to access more formal sources of working capital credit. Faster payment cycles in turn will ease cash flows and create a virtuous cycle. Moreover, a more formalised, automated digital collection system could potentially allow vendors to charge transparent late fees to consumers thereby mitigating the stress on working capital.

Deeper business insights and ability to serve customers more effectively

The current ecosystem of roving services is characteristically informal with most decisions of the providers based on an intuitive reading of the market and a high degree of vulnerability of business that is unable to cope with emergencies and shocks. Digital solutions can start generating data that allows for low-level analysis in order to serve more customers better (for example, deeper business insights on profitable segments, optimising business operations, pre-empting cash flows, longer horizon planning to name a few among other potentially beneficial insights).

Progressively increasing value for service providers as their usage of the platform increases

As the platform begins to gain more insights into the financial transactions of the roving vendors and their business cycles, there is potential to bring third party providers to offer products beyond just payments and capital, extending into insurance, investments and savings. The service providers can infact become channels for distribution of some these products to eventual customers, with the platform serving as a one-stop shop for all their business process automation needs.

Designing a business model

In order to illustrate how the opportunities to digitise the roving service provider ecosystem can translate into a viable business offering, some recommendations and best practices are outlined in this section.

Key product features

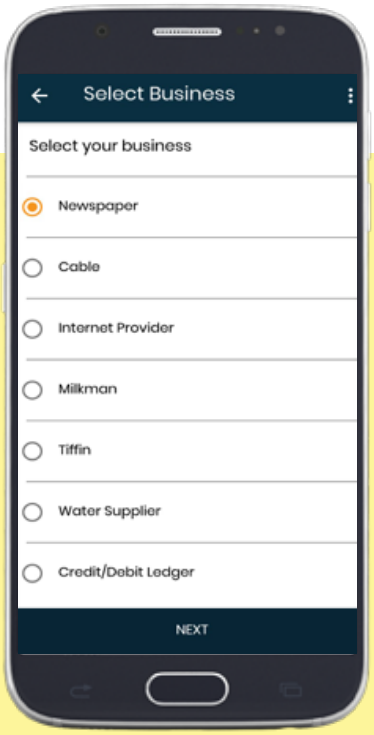
Business automation features that streamline vendor operations

At its most basic, the product needs to be developed as a lightweight mobile-based, micro-enterprise resource planning tool (micro-ERP) which includes basic components such as a light touch customer relationship management module, bulk invoicing, payments collections, automated reconciliation, basic grievance redressal and customer support work flows and dashboards that summarise key metrics that a roving vendor would be interested in knowing at a glance. Integrating the application with existing app ecosystems such as WhatsApp, SMS, and popular payment apps, will facilitate adoption.

Building depth of features and breadth of services

Each service vertical, be it newspaper vending, milk vending, cable broadcast, internet services provision or water delivery services, has its own unique needs in terms of the data that needs to be tracked and key business processes that have to be supported. For example, a cable

operator may want to see the set top box number, security deposit paid by a customer and their subscription card number. The newspaper vendor on the other hand, may like to see the subscription list per customer. The business model of providing a digital solution to roving services provider is essentially that of a SaaS (Software as a Service) targeted mainly at B2B use cases and hence needs to be robust in terms of the depth of features it provides. That said, as a business model that is dependent on transaction fees charged to customers, it is also critical that a large vendor base is onboarded onto the platform thereby increasing the total throughput of transactions. This will come from vendors across a breadth of services each with their own unique features. Developing this solution therefore is a twin challenge of balancing both a depth of features and a breadth of services.



Breadth of services: *Over time, MeraPaper expanded to include other subscription based services like cable, milk delivery, water delivery etc and rebranded itself as Bix42*

Depth of services: *Customised UI for cable broadcast where the channel list is provided*

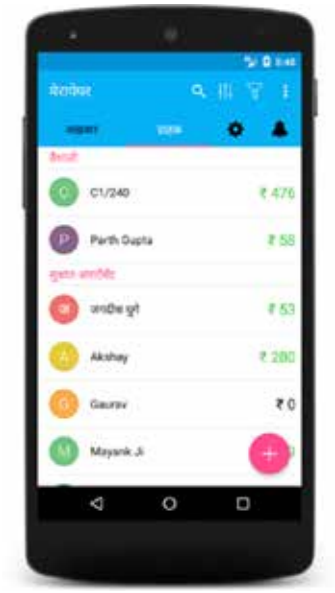
User experience mirrors familiar platforms

While the digital savviness of different service providers varies (for example, cable operators, given the technical nature of services they offer, are generally more technologically savvy compared to the average milk vendor), there are a few dominant applications such as Facebook and WhatsApp that determine the extent of familiarity that this segment of vendors has with technology interfaces. Building digital solutions that mirror the user experience of these platforms reduces the cognitive load that first time users of the application may have. For example, linear layouts that promote discovery of content through scrolling, are much easier to navigate. Similarly, having customer contacts available in one place, with necessary information highlighted, is important for vendors to be able to quickly access important information.

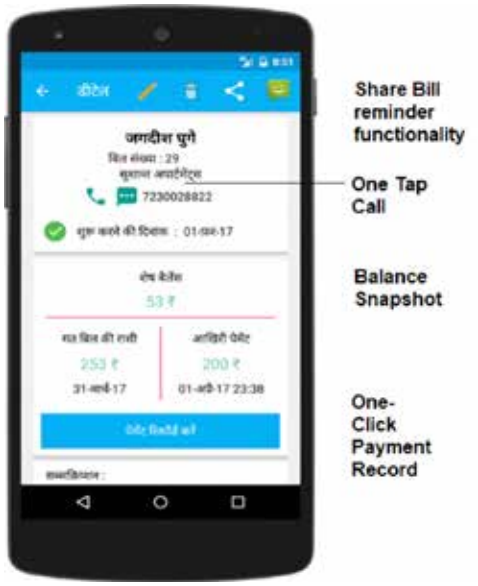
Gamifying the user experience

Inspite of the evident value that automation and digitization can potentially provide to roving vendors, the first hurdle to cross is essentially that of behavior change. The proposition to pay for services like payments and invoicing which were until now done manually, albeit “free of cost”, is a behavior that is hard to change. Gamification principles that can potentially alter behaviors and create excitement amongst the target vendors, is one such strategy to engender behavior change. For example, showing vendors the total amount of payments that have been received till date on the platform, can demonstrate the impact even if the percentage of customers adopting it is small. Similarly, using goals as a way to motivate usage and uptake, are some other gamification mechanics that can be tried.

Shared below are some plausible screenshots of what a B2B solution can begin to look like keeping in mind some of these UX principles.



Screen providing a list of all customers and their due payments viewed area-wise



Individual detail of each customer

Report generated for the vendor to keep a tab on the collections and balance. The record helps them monitor their finances.

Building a revenue model

The business model of providing automation support to roving service providers (invoicing, payments, collections, CRM) is unlikely to be sustainable given small ticket sizes and small margins. It is therefore critical for this business model to figure a way to scale quickly through partnerships as well as find other sources of revenue, for example, through cross-selling. For the latter, acting as a channel to sell financial services to end consumers outside of the principal business that the roving service provider may be engaged in, is just one of many possibilities. There is also the potential of channeling advertising and marketing offers by consumer goods companies on such a platform.

At its most basic, the business model for a B2B application support for roving providers will need to consider the following:

Sources of revenue would comprise of:

- **Subscription fee** that allows a vendor to use the mobile application to start digitizing key business processes like invoicing, payments, collections etc. It must be noted that while an upfront annual or monthly fee may seem substantial and hence a potential deterrent for most vendors to commit at one go, allowing them to understand the value the platform can deliver through a few months of free use, can help firm up their commitments
- **A transaction charge** that is applicable on all payments made by customers through the platform. The typical charges of existing payment gateways such as PayTM, debit cards, UPI etc can vary between 0.5%-2% of the value of transaction. There is an opportunity for the solutions provider to add a margin on top of this and pass it onto the customer.

Optimized revenue models will blend recurring subscription charges with variable transaction fees in a way that balances simplicity, incentives for greater usage, and margins that can recoup costs and more. Where possible, pricing should align with sources of value to users — for example, services or features that provide most value (e.g., payment collections, access to credit) should be chargeable. On the other hand, even though value increases with scale of operations, pricing may need to be tempered to encourage users to grow their usage or to attract big accounts (say, through higher subscription charges but lower transaction fees associated with higher usage levels), especially given network benefits. Similarly, where custom requirements are needed (e.g., enterprise accounts), pricing should also be negotiated in a way that reflects costs.

The major sources of cost would comprise of:

- **Payment gateway charges:** As described above, payment gateway charges can vary between 0.5–2%. In the initial days of service provision it may be more prudent to use more popular payment gateways (for example, PayTM) to build a substantial transaction volume. Once the volumes reach a critical mass, there is an opportunity to integrate lower cost options (like debit cards, UPI) and thereby improve margins
- **Nodal banking charges:** The solutions provider will need to incur nodal banking charges which is used as a settlement account to collect payments and thereafter disburse them to the vendor's account
- **Lead generation costs:** Costs involved in identifying vendors and pitching the solution to them. Marketing activities would typically involve feet-on-street staff (FoS) organizing vendor meetups and demonstrations of the platform.
- **Cost of onboarding:** This is likely to be one of the most significant costs since it involves creating a vendor account and adding their customer database to the platform (without which the utility of the platform is minimal). Given the demographic and socio-economic profile of these service providers, it is likely that the entire process would have to be done manually with the solutions provider deploying FoS to collect and add the data. Over time however, automated processes may be deployed such as bulk upload options or voice-based inputs.

Merapaper (Bix42) has seen conversion rates of 10–20% from generating leads to having roving service providers who are using the platform actively. The model they follow is that of a 2–3 month free trial period within which the vendors can use the platform and understand the value they can derive from it. Once the benefits of automated invoicing and collections are established, almost 70–80% of active users transition to a paid model. It takes roughly 5–6 month period for Merapaper (Bix42) to break even on the variable costs per vendor.

Key partnerships

Upstream collaborations with principals to expand reach

Given the high costs of acquisition and network effects at play, a relatively faster way to scale the platform reach is through upstream partnerships with the nodal brands or institutions under each service vertical. For a newspaper vendor, it would be publication agencies which could potentially give access to a large base of vendors. For milk vending it would be the dairy board in that particular geography. For certain verticals like cable operators, the partnership can also be with infrastructure providers such as companies providing set top boxes. It must be noted however, that the platform has to remain brand agnostic because a single vendor, as in the case of newspaper vending, may be sourcing from multiple publications. From the perspective of the principal agency, data privacy and protection would be a key requirement in order to be able to partner with the platform.

Other challenges of partnering with these principals are idiosyncratic to the particular vertical in question. For example, a highly competitive FMCG sector has meant that brands are hesitant to build partnerships where sensitive data on distributor margins may potentially get compromised. Dairy boards being quasi-government led are slower to take decisions and may present just routine operational bottlenecks that a startup cannot afford. Strategising around these parameters can be a way for solution providers to prioritize service verticals where distributors are relatively easy to access, have independent decision-making authority or where principal brands and manufacturers offer more support.

Financial product companies to offer value-added services

As the platform becomes more sophisticated and reaches a certain scale, long-term transactions data of vendors can be used to assess the needs and viability of providing other financial services to them. Modern financial services firms that have the capability of using APIs exposed by the platform, can do real-time analysis and push offers seamlessly to the end client. These could include NBFCs and lenders, insurance companies, or wealth management companies.

As mentioned before, there is the added opportunity of selling financial services further downstream to end consumers, wherein the roving service providers become the last mile distribution channel.

Banking partnerships

Banking services are a foundational component of the entire service delivery model. This ranges from low-cost payment gateway options, nodal banking solutions, having a robust last-mile banking infrastruture, and streamlined processes that can help in opening bank accounts for vendors, several of whom may not have a bank account, or have dormant accounts. Having a strategic partnership with banks can not only improve operating margins but also provide an overall better user experience.

Concluding thoughts

The upside on the of digital solutions for this segment depends on a large vendor base actively using the platform, and the ability to cross-sell services that are built on a vibrant transaction footprint. The dominant risk of such a business model therefore is the inability of the solutions provider to achieve scale within a short time frame.

While this particular opportunity area of providing B2B business automation support to the semi-organised sector is under-penetrated, it is not outside the remit of large payments platforms to step in and start providing value-added services. An in-depth understanding of the needs and pain-points of this merchant segment, and having the speed and agility to execute on these would remain the most critical success factors.

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